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Factors Affecting the Saudi Arabian Higher Education Creative Environment

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Research in Progress

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Abstract

Creativity is an essential pillar for individuals in higher education institutions (HEIs). The promotion of a research culture in universities necessitates an environment supporting new ideas and innovation by encouraging their staff to be more creative. The Saudi government is trying to improve its higher education system by encouraging creative environments to support socioeconomic development and achieve a transformation from an oil-based to a knowledge-based economy. The purpose of this study is to identify the factors that contribute to creativity and innovation among academic staff in Saudi Arabian HEIs. Therefore, this research-in-progress paper discusses how a specific set of organizational, individual and technological factors can support the achievement of a creative environment. Accordingly, a conceptual framework is proposed that lay the foundation for a creative environment in Saudi Arabian HEIs, with the ultimate aim of building an innovative environment in Saudi Arabian HEIs.

Keywords Organizational factors, Individual factors, Technological factors, Saudi Arabian Higher Educational Institutions.

1 INTRODUCTION

Creativity is increasingly considered as one of the most important elements for the survival of organizations. As described by Bassett-Jones (2005), creativity is an essential part of innovation, and a precondition for successful innovation. While it was previously viewed as simply coming up with new ideas, now organizations are busy developing strategies that foster creativity and lead to new products and services. As a result, there is greater emphasis on putting in place the efficient processes and activities that that promote a culture of creativity and add value to the organization. It is now understood that creativity ranges from intuitive thoughts, which are often referred to as divergent thinking, to highly structured processes that encourage brainstorming through collaborative team activities. Often the choice of what type of creativity to use depends on the goal of the creative process. There is now general agreement that creativity for individuals and organizations can be achieved through collaboration, which leads to the creation of new knowledge and results in an overall effectiveness. Furthermore, the investigation of extant literature on organizational creativity helps us to gain in-depth insights and scholarly perspectives on behavioural research on individual creativity and organizational research on innovation. In particular, studies like Amabile (1983) illustrate the importance of examining the creativity of teams and individuals (Woodman et al. 1993). In order to achieve a collaborative and creative working relationship, it is important to take advantage of some factors that represent key elements of building a creative and innovative environment supporting the creativity and innovation of Saudi Arabia's higher education creative environment.

A number of researchers have investigated and identified critical factors that affect creativity at individual and organizational levels (Amabile and Pratt 2016; Woodman et al. 1993) within the business sector; however, insufficient research has been done to identify the drivers of creativity in higher education institutions (HEIs). Hence, we aim to propose a conceptual framework to bridge this gap. Drawing upon Amabile and Pratt (2016) creativity and innovation's componential theory, the framework will be developed after a comprehensive review and reflection of the research literature governing creativity in HEIs. The proposed framework intends to add new knowledge and rigor to the literature on creativity in the Saudi Arabian HEI context. Accordingly, this research will operationalize the organizational, individual and technological factors that support the achievement of a creative and innovative environment for Saudi Arabian HEIs, specifically in terms of research creativity and teaching creativity.

An important goal of achieving a creative and innovative environment is selecting the optimum way to choose the best creative process and the organizational support needed to nurture it. This paper focuses on creativity in universities. Universities are leading institutions of knowledge and are at the cutting edge of research and scientific innovations. The promotion of research culture in universities necessitates an environment that supports new ideas and innovation by encouraging their staff to be more creative. Individuals with creative minds form the basis of fostering a knowledge and research culture in universities. It can be argued, however, that emphasis in universities focuses on innovation driven by highly knowledgeable individuals and often lacks the structures that lead to innovations through multidisciplinary activities. this paper theoretically argues that research on creativity must take into account the cultural aspects that offer organizational support required for innovation.
The model developed in this research is applied in Saudi Arabian universities. At present, innovation is increasingly being seen as a critical factor for the growth of Saudi Arabia. Recently, the Global Innovation Index (GII) 2018 report revealed that Saudi Arabia is lagging behind other countries in terms of creativity and innovation, with a ranking of 61. In addition to this, Saudi Arabia was positioned 104th in the world in term of innovation efficiency. In spite of the fact that Saudi Arabia has been allocating considerable funding in education sector (positioned 6th in the world), the overall quality of education stands at 59th position, with the quality of its management schools positioned at 78th. These indicators demonstrate a need for improvement in the education system (Iqbal 2011). The importance of creativity and innovation in Saudi Arabia comes from the need to achieve a transformation from an oil-based economy to a knowledge-based economy, as envisioned in the Saudi Arabia 2030 Vision. This transformation based on Saudi Arabia 2030 Vision launched in 2016. The "Saudi Arabia's Vision 2030 and the National Transformation Program 2020" also places emphasis on national plans to provide a variety of learning methods in the higher education sector, including: improving the learning environment to stimulate creativity and innovation (Ministry of Education 2019).

2 THEORETICAL BACKGROUND

2.1 Componential Theory of Creativity and Innovation

Among the theories of creativity, componential theory has gained wider acceptance. Amabile (1983) in her theory outlines three critical elements of individual creativity or small team creativity: skills in a particular domain such as domain knowledge or expertise, task motivation, and creativity-related skills. The theory is helpful for both psychological and organizational creativity researchers, as it depicts the process of creativity, its effects on the process, and the results. Two vital assumptions underlie the theory. The first is that there is a continuum from conventional, low levels of creativity in regular daily existence to a higher level of innovation in historically important inventions, scientific discoveries, performances and artworks. The second assumption is connected to the foundation assumption that there are levels of creativity in any individual work, even inside a particular area. The creativity level that any individual creates at some point in time is an element of the creativity components operating externally and internally. Amabile's theory suggests that the highest creativity is achieved when an intrinsically-motivated individual who has high skills performs in a highly supportive environment (Amabile 2012). Amabile (1988) extended the theory of individual creativity to focus on creativity and innovation because of the importance of organizational impacts on creativity. Amabile et al. (1996) illustrated that there are three elements of the wider work environment that impact an employee's creativity. The first component is the motivation to innovate, which is considered as the fundamental orientation of the organization in the way to innovation. The second component is the resources in the task domain. This includes everything the organization can access in order to help creative work in a focused domain. The third component is skills in innovation management, which are the skills that involve the overall management of the corporation as well as the management at the levels of units, projects, and divisions.

3 RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

3.1 Research Model

As discussed in the previous section, prior research emphasizes the positive effects of a set of factors on creativity and innovation in business organizations. The model proposed in this research goes a step further in the way that it aims to investigate the impact of a blend of organizational, individual, and technological factors and how they help derive creativity, in particular, teaching and research creativity in the Saudi Arabian HEIs. The research model is shown in figure 1.

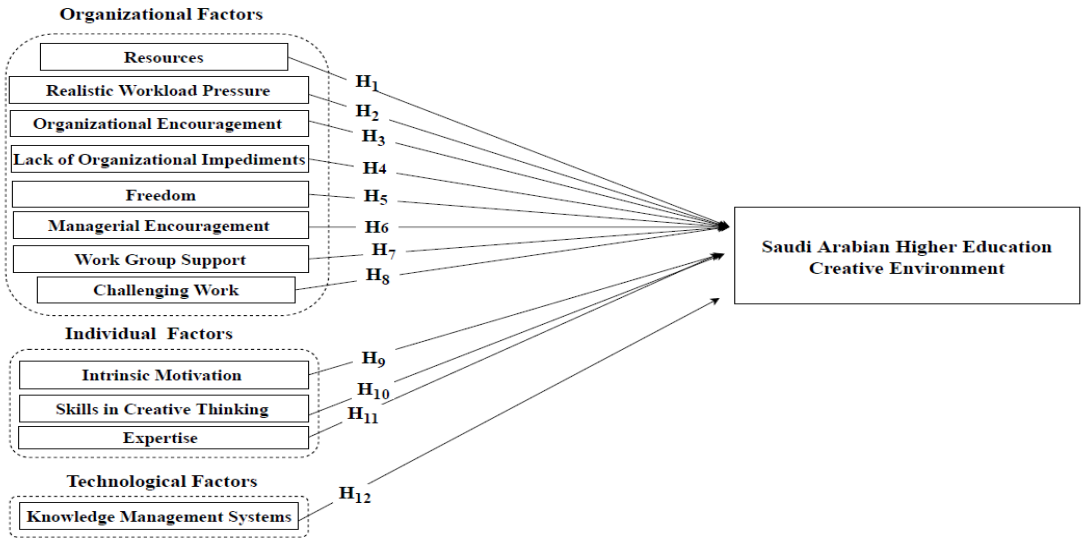

Figure 1: Proposed Research Model

3.2 Hypotheses Development

In order to develop a model that supports creativity and innovation in HEIs, constructs from organizational, individual, and technology must be considered. The most applicable constructs from the organizational dimensions supporting the making of a creative and innovative environment in Saudi Arabian HEIs, specifically in term of research and teaching creativity, are resources, realistic work

pressure, organizational encouragement, lack of organizational impediments, freedom, managerial encouragement, work group support, and challenging work. The most related constructs from individual dimensions are intrinsic motivation, skills in creative thinking, and expertise. Finally, the related construct from the technological dimensions is knowledge management systems (KMS). All of these dimensions are briefly described in the context of the creative and innovative environment of Saudi Arabian HEIs in the following sub-section.

3.2.1 Organizational factors

- **Resources:** Organizational resources are one of major factors of organizational creativity (Galende and de la Fuente 2003). Amabile et al. (1996) describe resources as "everything that the organization has available to aid work in a domain targeted for innovation (e.g., sufficient time for producing novel work in the domain, and the availability of training)" (p. 1156). Therefore, we hypothesise that:
  H1: *Resources positively affect Saudi Arabia's higher education creative environment.*
- **Realistic work pressure:** Realistic workload pressure can affect creativity in either a negative or positive way through the differentiation of two distinct forms of pressure. Excessive workload pressure will have a negative influence due to not employees not being given time to be creative; therefore, employees with high workload pressure will forced to use simple and efficient strategies that are less creative (Mumford et al. 2010). On the other hand, challenges can have a positive influence on creativity and can drive employees to produce new ideas and motivate the creative staff to be more creative (Byron et al. 2010; Epstein et al. 2013). Therefore, we hypothesise that:
  H2: *Realistic work pressure positively affects Saudi Arabia's higher education creative environment.*
- **Organizational encouragement:** Organizational encouragement can be defined as the organizational strategies and culture that support creativity and innovation (Amabile et al. 1996). According to Zhou and Shalley (2003), organizations should reward, support and recognize creative thoughts and innovative problem-solving techniques that encourage creativity and innovation. In addition to this, organizations should have a mechanism for developing creative ideas. Therefore, we hypothesise that:
  H3: *Organizational encouragement positively affects Saudi Arabia's higher education creative environment.*
- **Lack of organizational impediments:** Organizational impediments such as the harsh criticism of new ideas, internal political problems, avoidance of risk, destructive internal competition, and overemphasis on the status quo are barriers to creativity (Amabile et al. 1996; Isaksen and Akkermans 2011). Some research has indicated that organizational creativity can also be obstructed by formal and rigid management structures (Shalley and Gilson 2004; Tseng and Liu 2011). Therefore, we hypothesise that:
  H4: *Lack of organizational impediments positively affects Saudi Arabia's higher education creative environment.*
- **Freedom:** Freedom is a critical factor that promotes creativity through management practices (Amabile and Gryskiewicz 1989). Freedom refers to a sense of control over one's work such as deciding what work to do or how to do it (Amabile et al. 1996). Previous studies have shown that employees will be more creative if they are given the freedom to carry out their work (Mathisen 2011; Moultrie and Young 2009; Zhou 1998). Therefore, we hypothesise that:
  H5: *Freedom positively affects Saudi Arabia's higher education creative environment.*
- **Managerial encouragement:** Amabile et al. (1996) describes management encouragement as a "supervisor who serves as a good work model, sets goals appropriately, supports the work group, values individual contributions, and shows confidence in the work group" (p. 1156). Managerial encouragement practices incorporate the practical support of endeavours to initiate new and improved approaches of execution (Bessant and Tidd 2007), the acknowledgement of innovative achievements and the continuous recognition of novel ideas to support group members' passion (Amabile 1998). Therefore, we hypothesise that:
  H6: *Managerial encouragement positively affects Saudi Arabia's higher education creative environment.*
- **Work group support:** Amabile et al. (1996) define work group support as "a diversely skilled work group in which people communicate well, are open to new ideas, constructively challenge each other's work, trust and help each other, and feel committed to the work they are doing" (p. 1156). According to Hennessey and Amabile (2010), the majority of creative work is achieved by more than one person when they cooperate together. In general, co-worker support increases individual creative self-efficacy and the degree to which individuals recognize their creative role in the workplace (Tierney and Farmer 2011). Therefore, we hypothesise that:
  H7: *Work group support positively affects Saudi Arabia's higher education creative environment.*

- **Challenging work:** Challenging work can be described as "a sense of having to work hard on challenging tasks and important projects" (Amabile et al. 1996, p. 1166). Amabile and Kramer (2007) state that organizational creativity can be improved through challenging work. In addition to this, employees' intrinsic motivation can be promoted by challenging work with supportive supervision (Haas 2006; Zhou et al. 2012). Therefore, we hypothesise that:
  H8: *Challenging work positively affects Saudi Arabia's higher education creative environment.*

3.2.2 Individual factors

- **Intrinsic motivation:** Motivation "refers to the passion and desire of someone to work on a specific task that is interesting, challenging and exciting for him" (Binsawad et al. 2019, p.5). Individuals seem to be more creative in the moments they feel motivated basically by enjoyment, interest, contentment and the challenge of work, not through extrinsic motivators (Amabile 2013). Hence, we hypothesize:
  H9: *Intrinsic motivation positively affects Saudi Arabia's higher education creative environment.*
- **Skills in creative thinking:** According to Amabile and Pratt (2016) creative thinking skills include the perceptual styles, cognitive styles and thinking abilities that are helpful for taking new points of view on issues, turning among various thoughts, thinking comprehensively, and making remarkable collections. Basadur et al. (1982), empirically revealed that there are positive improvements to attitudes associated with divergent thinking through training in creative idea processes. Therefore, we hypothesize that:
  H10: *Skills in creative thinking positively affect Saudi Arabia's higher education creative environment.*
- **Expertise:** Binsawad et al. (2019, p.5) describes expertise as the "skills of performing a specific task in the most effective and creative manner". Park et al. (2014, p.204) state, "Expertise refers to actual knowledge that organizational members have". Individual expertise can contribute to creativity in unexpected ways; e.g., group members who have significant difference in expertise to other group members can statistically experience a considerable increase in individual creativity (Huang et al. 2014).. Therefore, we hypothesise that:
  H11: *Expertise positively affects Saudi Arabia's higher education creative environment.*

3.2.3 Technological Factors

- **Knowledge management systems (KMS):** Maier (2007) defines knowledge management systems as "an Information and Communication Technologies (ICT) platform that combines and integrates functions for the contextualized handling of both, explicit and tacit knowledge, throughout the organization or that part of the organization that is targeted by a KM initiative"(p. 86). Knowledge is originally produced due to individual and collective learning processes that are difficult to manage (Al. Othman and Sohaib 2016). However, a creativity-supporting organizational culture can exist when supported with projects and the help of specialized research and development (R&D) units (Maier 2007). Examples of ICT supporting knowledge creation are creativity support functions in content management systems, analytics tools, communication and collaboration systems, and learning and creativity support systems. Therefore, we hypothesise that:
  H12: *Knowledge management systems (KMS) positively affect Saudi Arabia's higher education creative environment.*

4 DISCUSSION AND CONCLUSION

This paper identifies the specific set of factors that facilitate the creation, promotion and sustenance of the creativity and innovation in HEIs, aimed at achieving the goals of innovation as set in the Saudi Arabian vision 2030. Therefore, after comprehensive review reflecting upon the research literature and focusing in particular on Amabile and Pratt (2016) the componential theory of creativity, a conceptual framework is developed. This theory guides the achievement of a creative and innovative environment in Saudi Arabian HEIs, specifically in terms of research and teaching creativity. A HEI Saudi Arabian creative and innovative environment supports a work culture where employees freely create new thoughts, think creatively and endeavour to achieve a common purpose. To conclude, HEIs should focus on the development of an innovation-led work environment among the academic staff in order to create shared opportunities, realize new ideas and subsequently achieve set research and innovation outcomes.

5 FUTURE IMPLICATIONS

This paper has explained the study-in-progress and attempts to develop a research model that guides the creative and innovative environment of Saudi Arabian HEIs specifically in term of research creativity and teaching creativity through the application of a suitable set of enablers from the organizational,

individual and technological dimensions. This study would statistically evaluate the influence of these dimensions on the creative and innovative environment of Saudi Arabian HEIs. The framework still requires some discussion about its application and the benefit it purposes to create, specifically in relation to its strengths and weaknesses.

6 RESEARCH METHOD

This research will apply mixed methods to examine the hypotheses and demonstrate the underlying central theme of the intended research model. The first stage of the study will apply the quantitative method and the data will be collected from the academic staff of various Saudi Arabian HEIs using closed-ended surveys. The survey items will be selected from previous validated research. The second stage would follow a qualitative research method in order to endorse or validate the quantitative findings. For this reason, in this stage qualitative data will be collected using semi-structured interviews with the academic staff of the selected institutions.

6.1 Data Analysis Approach

The quantitative data will be analysed using structural equation modelling (SEM) to test the causal relationships between the various constructs of the model (Hair et al. 2006). The method is aligned with previous research (Alharbi et al. 2016; Sohaib and Kang 2016). For analysis of the qualitative data, we will collect the data using interviews and interpret it to confirm the results of quantitative findings. The use of mixed methods will help achieve multiple goals, such as improving coherence and consistency, evaluating the central sufficiency and measuring the validity and reliability of both data types.

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